

# Diskette Gazette

**News and Information  
about Microdiskettes**

Issue 1  
May 1986

## WELCOME!

Welcome to the very first issue of our new **Diskette Gazette**! The Gazette will be an ongoing newsletter bringing you articles and information about diskettes and their use in data storage systems. We will focus primarily on 3.5 inch microdiskettes, but much of the discussion will be useful for other sizes as well.

In addition, the **Diskette Gazette** will offer a variety of diskette and accessory products for sale. You may find many of them productive or useful or convenient. And most will be less expensive than from other sources. Let us know if there are storage or accessory products you are interested in that we might be able to offer.

The **Gazette Library** will also be offering a series of disks containing 'public domain' software and documents. Let us know if you would like to contribute. What kinds of documents and programs interest you?

Please send in your comments and suggestions about the **Diskette Gazette**. And be sure to write us with your questions about diskettes.

## Mixing SS/DD and DS/DD

Many people are currently asking about the use of *single-sided* diskettes for *double-sided* storage in double-sided drives. We have talked about this with Apple Computer and with several diskette and disk drive makers. In all cases both the drive and disk manufacturers do NOT suggest using single-sided media as double, even when they format properly as doubles.

There are several reasons put forward to support this position: (1) Different material is used in the double-sided medium to handle the magnetic fields that are written on both sides. Without it there could be 'print-through' that damages the data. (2) The double-sided diskette is certified error-free on both sides but single-sided is not. (3) The burnishing and lubrication of the disk is done on both sides for the double-sided version, thus saving read/write head wear in the drive. (4) The metal hub in the middle of the disk has a smaller tolerance for movement in a double-sided drive; that is, higher precision disks are needed for reliable double-sided operation.

These reasons combine to make a good case for purchasing only double-sided media for use in double-sided drives. This is similar to the early days of 5.25 inch drives. When the double versions started showing up, the same types of recommendations came out of the industry. And for a while they were right. After a couple of years, however, almost all single-sided disks were really double (due to manufacturing economies, it became less expensive to make both single and double disks on the same production line) so it didn't matter anymore.

It seems likely that this will also happen to the 3.5 inch media. After a year or two almost all the media will really be double-sided. For double-sided drives, we suggest that it makes sense at this time is to use double-sided diskettes for all important work. For some games or other less important items, a single-sided diskette that can be successfully formatted as a double could be used in order to save money. If maximum head life is a concern, however, it might be wise to stick with certified doubles, at least for a while.



## Making & Testing Diskettes

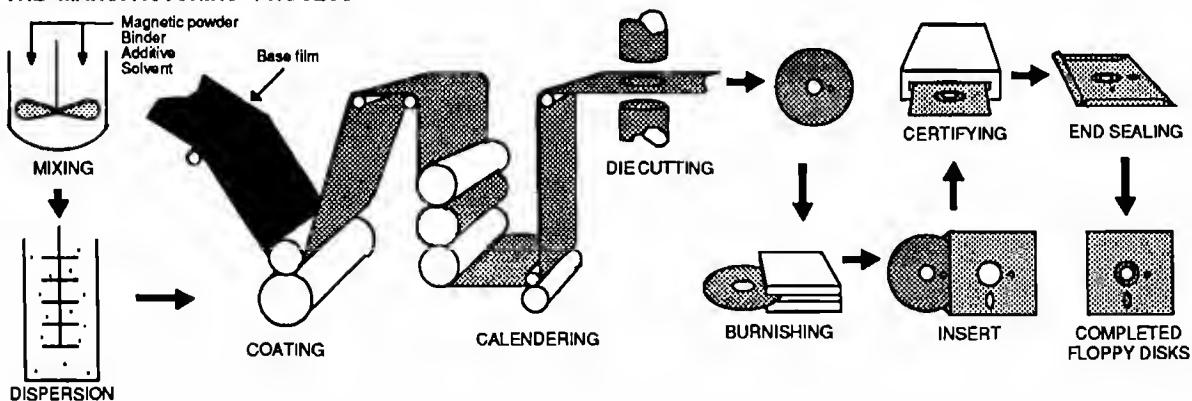
Diskette manufacturing makes use of advanced technology to accomplish highly-reliable high-density storage. The drawing below shows the process that each 5.25 inch diskette goes through as it is made and packaged. The main difference for 3.5 inch media, other than size, is the jacket. The 3.5 inch diskette uses a plastic enclosure and is sealed differently.

Most manufacturers use comprehensive tests to ensure that the magnetic surface of every disk is 100% error-free. This is done in the certifying section before the material is sealed in the case. Surface smoothness is important to reduce abrasion and thus prolong the life of the

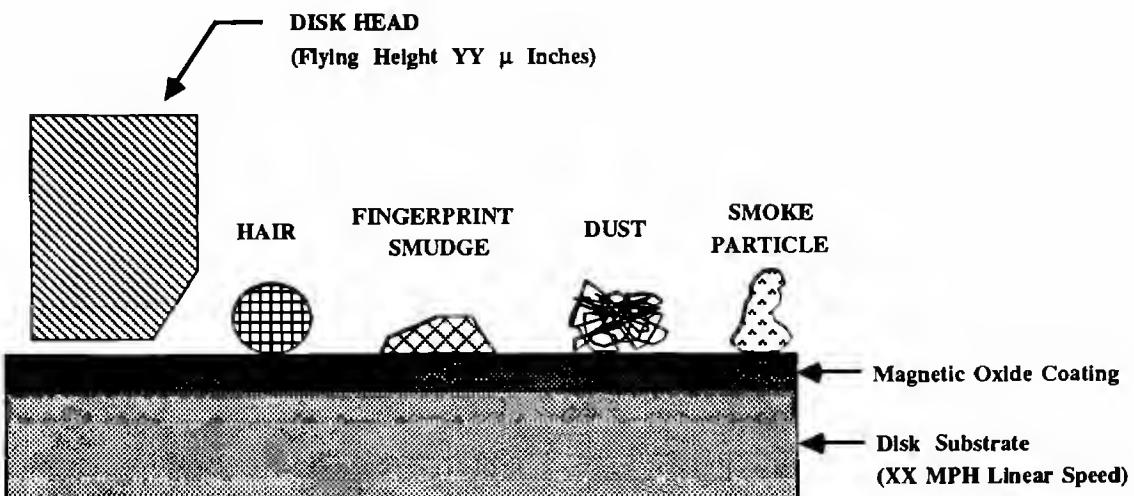
read/write heads as well as of the disks themselves. This smoothing is accomplished at the burnishing stage.

It is important to take good care of diskettes in order to minimize trouble with data stored on them. Although it is more difficult to damage a 3.5 inch diskette compared to the older, more fragile 5.25 inch, problems are still possible. Don't ever open the shutter and touch the media. Keep diskettes out of direct sunlight and away from direct heat. Of course, don't put them near any magnetic materials (such as refrigerator magnets, motors that are running or that turn on and off, ImageWriter lids, etc.). The drawing of dirt at the bottom of this page shows the relative sizes of some materials with respect to the recording head. It doesn't take much contamination to cause damage.

### THE MANUFACTURING PROCESS



DISK HEAD  
(Flying Height YY  $\mu$  Inches)



## DISKETTE RATINGS

At IDI we do a lot of diskette testing and duplication work, plus we talk with other duplicators. The rating list on this page summarizes our conclusions and the results of our tests. You will notice that we have so far tested very few double-sided disks, although that business is now beginning to grow. Our ratings fall into five categories: **Best, Excellent, Good, Poor, Bad.** We rate Sony as the best, JVC and Maxell second, 3M third, Fuji and BASF fourth with the others coming in last. TDK, Dysan, Brown, Nausua, Polaroid and Kodak have not been tried in meaningful quantities. JVC has improved very quickly and we now consider them almost the equal of Sony. We will be updating our ratings as we gather more data.

### Sony single-sided

### Rating: The Best!

Problem rate: Better than 1 in 5,000

Quantity tested: More than 100,000

Head wear: Least amount

Color: Comes in Sony blue and Apple beige.

Comment: Apple's primary SS/DD source.

Single-sided works reasonably well as double-sided. Almost zero media or package problems.

### Sony double-sided

### Rating: The Best!

Problem rate: Better than 1 in 2,500

Quantity tested: More than 5,000

Head wear: Least amount

Color: Comes in Sony blue and Apple white.

Comment: Apple's primary DS/DD source.

Almost zero media or package problems.

### JVC single-sided

### Rating: Excellent

Problem rate: Better than 1 in 3,000

Quantity tested: Over 30,000

Head wear: Very good; almost as good as Sony

Color: Comes in blue one shade lighter than Sony

Comment: Few media or package problems.

### JVC double-sided

### Rating: Excellent

Problem rate: Better than 1 in 2,000

Quantity tested: Over 3,000

Head wear: Very good; almost as good as Sony

Color: Comes in blue a shade lighter than Sony

Comment: Few media or package problems.

### Maxell single-sided

### Rating: Excellent

Problem rate: Better than 1 in 2500

Quantity tested: Over 20,000

Head wear: Very good; same as JVC

Color: Comes in dark blue or Apple beige

Comment: Apple sometimes uses Maxell as an alternate source to Sony.

### 3M single-sided

### Rating: Good

Problem rate: Better than 1 in 1,500

Quantity tested: Over 5,000

Head wear: Not enough tested for valid results

Color: Normally silver-grey, can be Apple beige

Comment: 3M, one of the best-known 5.25 inch disk suppliers, is very low-key about their 3.5 inch products. A few shutters pull off easily.

### Fuji single-sided

### Rating: Good

Problem rate: Better than 1 in 1,000

Quantity tested: Over 5,000

Head wear: Not enough tested for valid results

Color: Normally blue but can be Apple beige

Comment: C. Itho & Co. is the importer. Once more are tested, Fuji may move up into the excellent range.

### BASF single-sided

### Rating: Good

Problem rate: About 1 in 500

Quantity tested: 20,000

Head wear: Very little

Color: Beige similar to Apple beige.

Comment: Some problems with off-center hubs which cause noise and misalignment and thus data errors. BASF says they have found the problem and it has been corrected. BASF has made very good 5.25 inch media in the past and once their packaging problem is fixed they may improve their rating.

### Memorex single-sided

### Rating: Poor

Problem rate: About 1 in 50

Quantity tested: 500

Head wear: Not enough tested for valid results

Color: Black

Comment: Some media refused to format. After format and copy some disks would not read properly in another drive. Some data errors. Although there has been trouble with the single-sided disks, we understand that the double-sided version has passed Apple's inspection and is certified. As an established disk manufacturer, Memorex should not have these problems.

### Verbatim single-sided

### Rating: ?

Problem rate: 1 in 500 (preliminary)

Quantity tested: About 1,000

Head wear: Not enough tested for valid results

Color: Verbatim dark blue

Comment: Some shutters break and stick easily.

We have not used enough to provide a full-scale test. With the company now purchased by Kodak, we may see better quality in the future.

## Gazette Products

A variety of products are available by mail from the **Diskette Gazette**. Our primary products, of course, are diskettes. We sell only the best quality diskettes and we offer several types from which you may select those that are best for your applications. In addition to both single-sided and double-sided diskettes, we also provide disks that are pre-labeled or pre-formatted or both. We presently offer Sony diskettes exclusively since we regard them as the very best. Notice that there are two color options for each diskette. You'll find our diskette prices quite aggressive. And there are some interesting bonus combination offers that make the disks even more attractive.

Our diskette accessories include several unique and interesting products. The **Micro Flip Pak™** (see picture) is very popular and quite handy as a portable carrier. It holds up to 14 diskettes and, when open, provides extra room for easy sorting and handling. It is available in either clear or smoked versions and measures 4 by 4 by 2 inches when closed.

The **Micro Disk Minder™** (see picture) holds up to 36 diskettes and makes an attractive addition to your desktop. It comes with four convenient index dividers. The base is black and it has a nice smoked cover.

**Disk Jackets™** (see picture) provide loose-leaf sleeve storage for your diskettes. Model DJ301 holds two disks and fits in standard 7 x 9 binders. Model DJ302 holds four disks and fits in a standard 8.5 x 11 three-ring binder. Both are made of vinyl and have reinforced grommets. Let us know if you need a sample to try. Our **Micro Data File** is a convenient combination of ten DJ301 jackets with a 7 x 9 binder.

The **Label Pak™** is a package of ten colored stick-on labels for 3.5 inch diskettes. There are five colors, two labels of each color. They are handy for coding your diskettes by categories.

The **Gazette** also offers products and services in addition to those shown on the price list. For example, we have 5.25 inch disks and several 5.25 inch accessories. We offer duplication services and customized labels for all our disks and diskettes. Please write for details. Or call us at 408 • 262 • 6660 for more information.

The **Diskette Gazette** is presently building a nice Library of Macintosh 'public domain' and 'shareware' software and documents. This gives you convenient access to many applications, utilities, games, graphics, fonts, designs and pictures, and at low prices. We charge for the diskette and the copying service but not for the software or documents. You can purchase any single-sided entry in the **Gazette Library** for only \$2.10 each. And we'll put the contents of any two single-sided disks you specify on a double-sided diskette for only \$3.00.

Currently the **Gazette Library** is offering eight disks: three utilities, one programming tools and four font disks. We will expand the number of **Library** disks available from the Gazette as time goes by. Several disks of MacPaint images will be added soon. Call for detailed listings of the contents of each disk if you need them.

GL Utilities #1: 16 utilities including Font/DA Mover 3.1, Switcher 4.9, QuickFile, RamDisk, RamStart, WayStation.

GL Utilities #2: Technical stuff for advanced users including Cleanup, Continuity, FEdit 3.21, PRAM2.

GL Utilities #3: 18 utilities including Archiver, MacWait, Menu Clock, MacClone, Index 4.5, Qwik Dir, RAM Test.

GL Programming #1: Programmer tools and languages including XlSp, ScrnEdit, Dialog Creator, DataFlow.

GL Fonts #1: Font utilities including Font Doubler, Font Librarian, FontDisplay. Also several non-roman pictorial fonts including Calro, TaliessIn, Demographics.

GL Fonts #2,3,4: Many roman fonts ranging from Akashi to Zurich.

### BONUS PRODUCTS

\* In addition to low prices for blank diskettes and for accessories, we offer **Gazette Library** disks as free bonuses. For each \$50 worth of products you purchase from IDI, we will add one free Library disk of your choice to your order.

\* And if you order \$75 worth of diskettes we will include a free **Micro Flip Pak**.